

AMENDMENTS TO THE DRAWINGS

The attached sheet(s) of drawings includes changes to Figure 7.

Attachment: Replacement sheet
 Annotated sheet showing changes

REMARKS

This is a full and timely response to the Office Action mailed August 9, 2007.

Claims 1, 3, 9 and 11 have been amended to more particularly define the present invention. Further, claims 2, 4-8, 10 and 12-16 have been canceled without prejudice or disclaimer to their underlying subject matter. Support for the claim amendments can be found throughout the specification and the original claims, see, in particular, page 9, lines 15-18, page 15, line 5, and Example 1 of the specification, and Figure 1 of the drawings. Thus, claims 1, 3, 9 and 11 are pending in this application.

In view of this amendment, Applicant believes that all pending claims are in condition for allowance. Reexamination and reconsideration in light of the above amendments and the following remarks are respectfully requested.

Objection to the Drawings

Figure 7 is objected to for failing to include the legend "Prior Art" since the Examiner believes only that which is old is illustrated in the Figure. Applicant believes that this objection has been overcome in view of the submission of a replacement Figure 7 in which the legend "Prior Art" has been added to the Figure.

Rejection under 35 U.S.C. §102

Claims 1 and 3 are rejected under 35 U.S.C. §102(b) for allegedly being anticipated by Ohkubo (U.S. Patent Publication 20010007367). Applicant respectfully traverses this rejection.

To constitute anticipation of the claimed invention, the cited reference must disclose each and every limitation of the claims. Here, in this case, Ohkubo fails to teach or suggest all of the claim limitations with particular emphasis on the newly added limitations "*inspecting a wafer (or two starting wafers) on the presence or absence of a pit cluster which is a collection where tens or more of micro-defects each in the shape of a pit having a size of the order of 0.08 to 0.2 μ m collect, and a size thereof is 1 μ m to 10 μ m*", and "*preparing two starting wafers on each of which no said pit cluster is present.*" As the Examiner noted on the bottom of page 3 of the action, Ohkubo only

discloses that the PV value (roughness) of the surface of the insulating layer is 0.4 nm, and the reference does not disclose using a wafer free of a pit cluster as the starting wafer.

Thus, in view of the amendments to the claims, withdrawal of this rejection is respectfully requested.

Rejections under 35 U.S.C. §103

Claims 2, 4 and 6-9 are rejected under 35 U.S.C. §103 as allegedly being unpatentable over Ohkubo in view of Aga et al. (WO 01/28000). With regard to claims 2, 4, and 6-8, this rejection has been rendered moot by the cancellation of these rejected claims. With regard to claim 9 and amended claims 1 and 3, Applicant respectfully traverses this rejection.

To establish a *prima facie* case of obviousness, the following three criteria must be satisfied. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally and mostly importantly, the prior art references, in combination, must teach or suggest all the claim limitations. Here, in this case, none of the cited references, either alone or in combination, teach or suggest all of the claim limitations with particular emphasis on the newly added limitations *"inspecting (or two starting wafers) a wafer on the presence or absence of a pit cluster which is a collection where tens or more of micro-defects each in the shape of a pit having a size of the order of 0.08 to 0.2 μm collect, and a size thereof is 1 μm to 10 μm ", and "preparing two starting wafers on each of which no said pit cluster is present."*

Based on Applicant's review of Aga et al., the reference only teaches pits caused by COPs. Aga et al. does not disclose the pit clusters as recited in the amended claims of the present application. More specifically, Aga et al. only teaches avoiding single defects having a diameter of 0.12 μm or more. The reference does not teach the step of *"inspecting a wafer (or two starting wafers) on the presence or absence of a pit cluster which is a collection where tens or more of micro-defects each in the shape of a pit having a size of the order of 0.08 to 0.2 μm collect, and a size thereof is 1 μm to 10 μm ", and "preparing two starting wafers on each of which no said pit cluster is present."*

Thus, Applicant submits that the amended claims are different from the combined disclosure of Ohkubo and Aga et al. and that this rejection cannot be sustained and should be withdrawn.

Claims 5 and 11 are rejected under 35 U.S.C. §103 as allegedly being unpatentable over Ohkubo in view of Fukami et al. (US Patent 6,060,396). With regard to claim 5, this rejection has been rendered moot by the cancellation of the claim. With regard to claim 11 and amended claims 1, 3 and 9, Applicant respectfully traverses this rejection.

Based on Applicant's review of the reference, Fukami et al. only discloses the method to prevent semiconductor wafers from being contaminated by metals in a polishing process by controlling the Cu concentration and the Ni concentration in a range of 0.001 to 1 ppb. Fukami et al. does not disclose the pit clusters defined in the amended claims which are inspected in the present invention. Further, in amended claims 9 and 11, starting wafers of the present invention are mirror polished and stored (after the polishing) in an environment of a heavy metal concentration of 10 ppb or less before being used in the claimed manufacturing method (note especially, wafer is immersed in pure water or the like for storage). Such features of the present invention are not at all disclosed in Fukami et al. since the object of the invention of Fukami et al. is totally different from that of the present invention.

Claims 10 and 12-16 are rejected under 35 U.S.C. §103 as allegedly being unpatentable over Ohkubo in view of Aga et al. and further in view of Fukami et al.. This rejection has been rendered moot by the cancellation of the rejected claims. With regard to amended claims 1, 3, 9 and 11, Applicant respectfully traverses this rejection.

Applicant believes that the deficiencies of Ohkubo, Aga et al. and Fukami et al. are still applicable with regard to this rejection for the same reasons as noted above. Thus, Applicant submit that the present invention is not obvious over the teachings of the cited references and respectfully request that this rejection under 35 U.S.C. §103 be withdrawn.

Applicant also wishes to note that an advantage of the present invention is that the oxide film achieves a low PV value without the need for mechanical polishing, whereas Ohkubo achieves its results using chemical mechanical polishing (see paragraphs [0101]-[0102] of Ohkubo).

CONCLUSION

For the foregoing reasons, the pending claims are allowable, and the present application is in condition for allowance. Accordingly, favorable reexamination and reconsideration of the application in light of these amendments and remarks is courteously solicited. If the Examiner has any comments or suggestions that would place this application in even better form, the Examiner is requested to telephone the undersigned attorney at the number below.

Dated: November 7, 2007

Respectfully submitted,

By 

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Application No. 10/525,397



Docket No.: ISH-0228

REPLACEMENT SHEET

Application No. 10/525,397

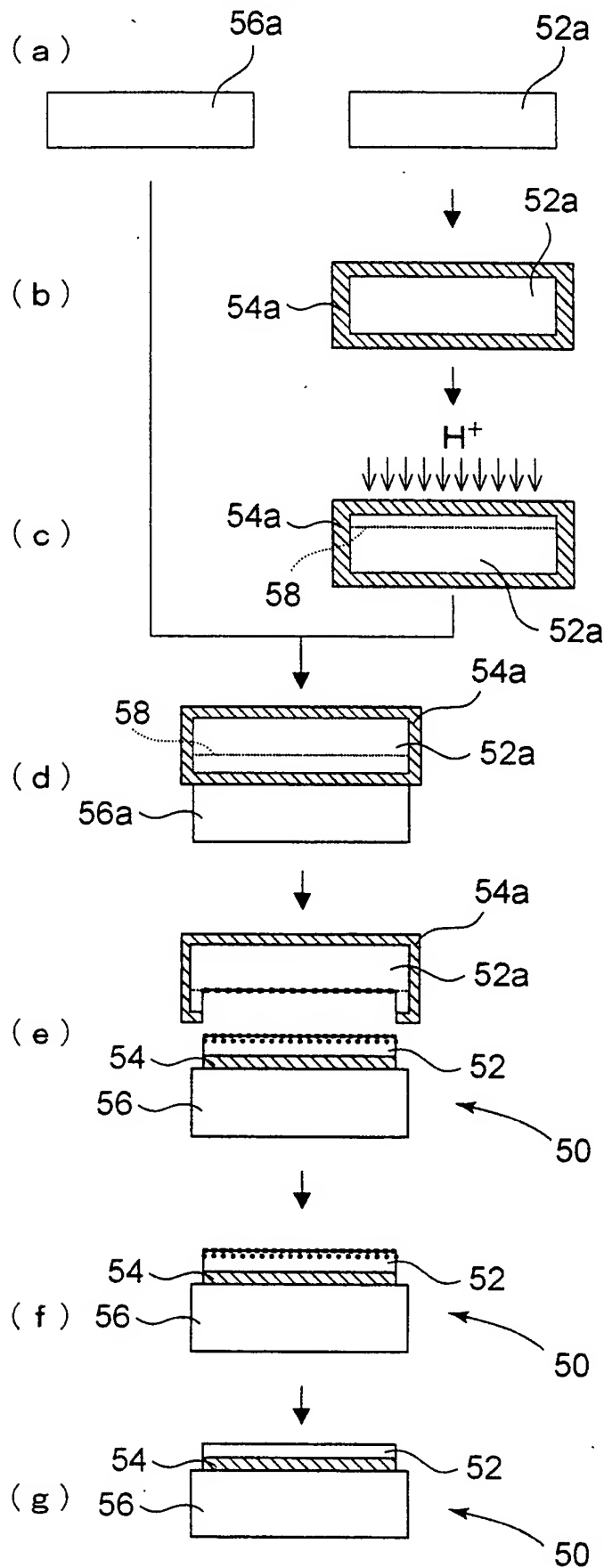


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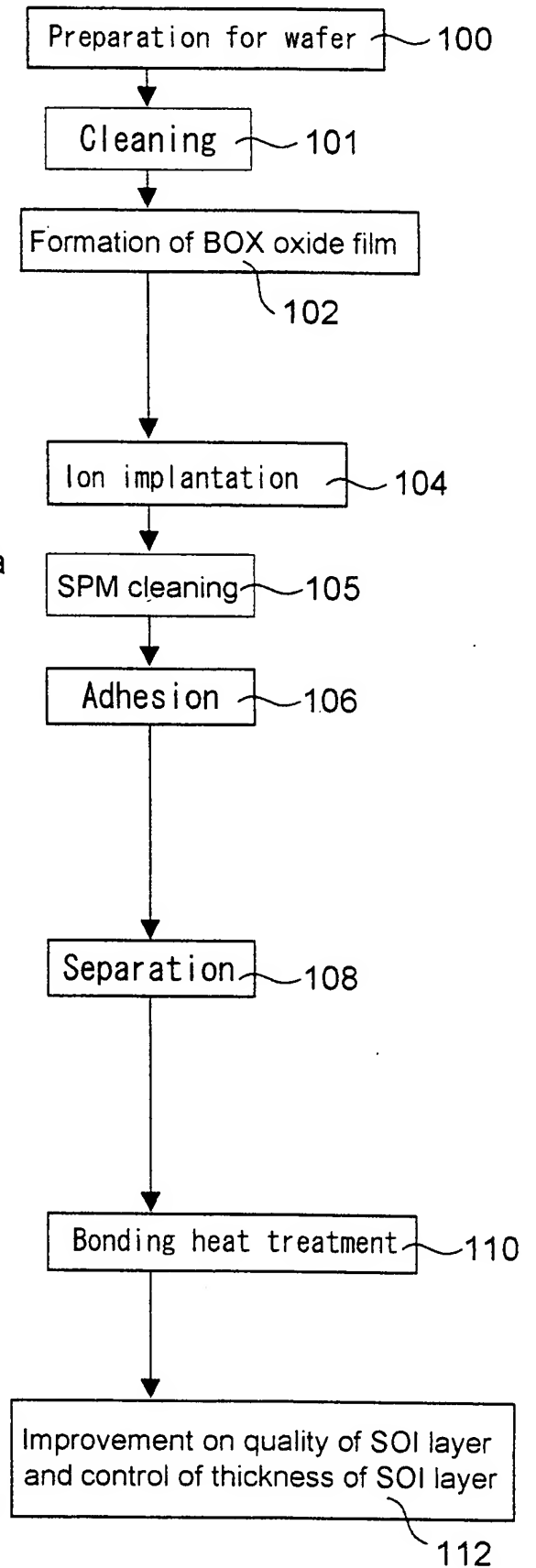
ANNOTATED SHEET



FIG. 7



Prior Art



Prior Art**FIG.7**